

REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 1-7 remain in the application. Claims 1 and 5-7 have been amended.

In the section entitled "Claim Objections" on page 2 of the above-identified Office action, claims 1-7 have been objected to because of informalities. Appropriate correction has been made. It is noted that "lateral edges" are clearly defined on page 11, line 3, and page 13, line 9 of the specification.

In the section entitled "Claim Rejections - 35 USC § 102" on pages 2-3 of the above-mentioned Office action, claims 1-3 and 5-7 have been rejected as being anticipated by Sugai (US Pat. No. 5,030,930) under 35 U.S.C. § 102(b).

As will be explained below, it is believed that the claims were patentable over the cited art in their original form and the claims have, therefore, not been amended to overcome the references. However, the language of the claims has been amended in an effort to even more clearly define the invention of the instant application.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claims 1 and 7 call for, inter alia:

a metallic layer on said well for forming a Schottky junction with lateral edges delimiting said Schottky junction, said lateral edges being at least one of curved, ramified, and rimose;

...

a contact region being highly doped for a low-impedance contact connection and having a lateral boundary in said doped well, said lateral boundary having one of a lattice-shaped structure, a finger-shaped structure, a comb-shaped structure, an irregularly curved edge, a ramified edge, and a rimose edge.

Sugai describes a device that includes Schottky diodes of standard structure, which are electrically connected by conductor tracks, the ends of which are interdigitated in comb-like fashion with further conductor tracks. A comparison of Figs. 1 and 2 of Sugai shows that the contact region 13, which evidently has the same shape as the output electrode 10, is a strip with parallel lateral boundaries.

In contrast, the structure of the Schottky diode according to the invention of the instant application is intended to improve the operating properties by a considerably increased length of the lateral edges of the Schottky junction. This is achieved by the form of the lateral limits of a metal silicide

layer (10) or a liner (7) or a liner on a metal silicide layer, which defines the extension of the Schottky junction, being as long as possible, according to the strip-like configuration of the embodiments of Figs. 3 and 4, or by an irregular shape, curved, ramified or rimose, of the lateral limits.

Only the reference Kellner et al., cited but not relied upon by the Examiner, shows a Schottky diode with curved lateral limits, which are in this case formed by finger-like projections of an electrically conductive transmission line. It was an object of this arrangement of Kellner et al. to specify a Schottky diode with leads and planar format suitable for a high limit or cut-off frequency in which a disruption-free provision of the characteristic impedance of the diode leads is assured.

However, Kellner et al. only show a special structure of the lateral edges of the metallic layers forming the electric connections to the Schottky diodes. The lateral edges that are of importance for the Schottky diodes of the invention of the instant application are the ones delimiting the Schottky junction itself.

Clearly, none of the references shows "a metallic layer on said well for forming a Schottky junction with lateral edges delimiting said Schottky junction, said lateral edges being at least one of curved, ramified, and rimose," as recited in claims 1 and 7 of the instant application.

In addition, none of the cited references discloses the form of the contact region (4) according to the invention of the instant application.

Claim 1 is, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claim 1, they are believed to be patentable as well.

Applicants acknowledge the Examiner's statement in the section entitled "Allowable Subject Matter" on page 3 of the above-mentioned Office action that claim 4 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

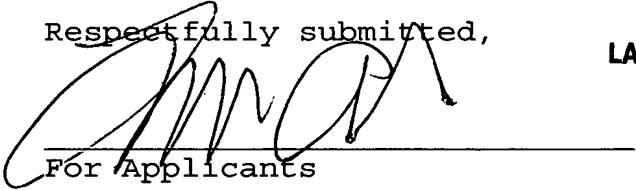
Since claim 1 is believed to be patentable as discussed above and claim 4 is dependent on claim 1, it is believed to be patentable in dependent form. A rewrite is therefore believed to be unnecessary at this time.

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In view of the foregoing, reconsideration and allowance of claims 1-7 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made. Please charge any fees which might be due with respect to 37 CFR Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

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